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Applicants: Shuguang Zhang, Alexander Rich, Lin Yan, and George Whitesides

Application No.: 10/071,500 Group Art Unit: 1627

Filed: February 8, 2002 Examiner: Not Available

Confirmation No.: 4636

Title: SELF-ASSEMBLING PEPTIDE SURFACES FOR CELL PATTERNING AND INTERACTIONS

CERTIFICATE OF MAILING	
I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as First Class Mail in an envelope addressed to Assistant Commissioner for Patents, P.O. Box 2327, Arlington, VA 22202	
on <u>4.24.03</u>	<u>Sandra Bringham</u>
Date	Signature
<u>Sandra Bringham</u>	
Typed or printed name of person signing certificate	

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Assistant Commissioner for Patents
P.O. Box 2327
Arlington, VA 22202

Sir:

This Information Disclosure Statement is submitted:

☐ under 37 CFR 1.129(a), or
(First/Second submission after Final Rejection)

☒ under 37 CFR 1.97(b), or
(Within any one of the following time periods: three months of filing national application (other than a CPA) or date of entry of the national stage in an international application; or before the mailing date of a first office action on the merits in a non-provisional application, including a CPA, or a Request for Continued Examination).

☐ under 37 CFR 1.97(c) together with either:
☐ a Statement under 37 CFR 1.97(e), as checked below, or
☐ a \$180.00 fee under 37 CFR 1.17(p), or
(After the 37 CFR 1.97(b) time period, but before final action or notice of allowance, whichever occurs first)

☐ under 37 CFR 1.97(d) together with:
☐ a Statement under 37 CFR 1.97(e), as checked below, and
☐ a \$180.00 fee under 37 CFR 1.17(p), or
(Filed after final action or notice of allowance, whichever occurs first, but on or before payment of the issue fee)

☐ under 37 CFR 1.97(i):
Applicant requests that the IDS and cited reference(s) be placed in the application filewrapper.
(Filed after payment of issue fee)

Statement Under 37 CFR 1.97(e)

- ☐ Each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement; or
- ☐ No item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned, after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of this Information Disclosure Statement.

Statement Under 37 CFR 1.704(d) (Patent Term Adjustment)

Applies to original applications (other than design) filed on or after May 29, 2000

- ☐ Each item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart application and this communication was not received by any individual designated in § 1.56(c) more than thirty days prior to the filing of the Information Disclosure Statement.
- ☒ Enclosed herewith is form PTO-1449:
- ☒ Copy of the cited reference are enclosed.
- ☐ Copies of cited references are enclosed except those entered in prior application, U.S. Application No. [], to which priority under 35 U.S.C. 120 is claimed. [The earlier application contains copies of the cited references.]
- ☐ The listed references were cited in the enclosed International Search Report in a counterpart foreign application.
- ☐ The "concise explanation" requirement (non-English references) for reference(s) [] under 37 CFR 1.98(a)(3) is satisfied by:
- ☐ the explanation provided on the attached sheet.
 - ☐ the explanation provided in the Specification.
 - ☐ submission of the enclosed International Search Report.
 - ☐ submission of the enclosed English-language version of a foreign Search Report and/or foreign Office Action.
 - ☐ the enclosed English language abstract.

[X] Applicant requests that the following non-published pending applications be considered:

Examiner's
Initials

____ U.S. Patent Application No. 10/317,838, by Shuguang Zhang, Alexander Rich, Lin Yan and George Whitesides, filed December 11, 2002, Docket No.: 0050.1587-004.

____ U.S. Patent Application No. [], by [inventor(s)], filed [], Docket No.: []

____ U.S. Patent Application No. [], by [inventor(s)], filed [], Docket No.: []

Examiner

Date

[X] A copy of each above-cited application, including the current claims, is enclosed.

[] A copy of each above-cited application, including the current claims, is enclosed, except those entered in prior application, U.S. Application No. [], to which priority under 35 U.S.C. 120 is claimed.

The Examiner is requested to return a copy of the above list of pending applications indicating which references were considered with the next office communication.

It is requested that the information disclosed herein be made of record in this application.

Method of payment:

[] A check for the fee noted above is enclosed, or the fee has been included in the check with the accompanying Reply. A copy of this Statement is enclosed.

[] Please charge Deposit Account 08-0380 in the amount of \$[]. A copy of this Statement is enclosed.

[X] Please charge any deficiency in fees and credit any overpayment to Deposit Account 08-0380.

Respectfully submitted,

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Dated:

April 24, 2003



CLAIMS AS FILED 12/11/02

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What is claimed is:

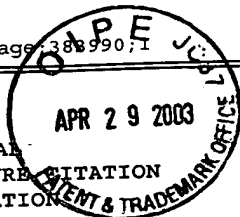
1. A device comprising:
a solid support; and
an array of isolated regions on the support, the array comprising a layer of peptides, wherein the peptides are bound to the support by a bond between the support and a terminal amino acid in a preselected, reproducible pattern.
2. The device of claim 1 further comprising a background region surrounding the isolated regions, wherein the peptides are not bound to the background region.
3. The device of claim 2 wherein the background region comprises an inert compound.
4. A device comprising:
a solid support; and
an isolated region comprising a layer of peptides, wherein the peptides are bound to the support by a bond between the support and a terminal reactive group in a preselected, reproducible pattern.
5. The device of claim 4 comprising a plurality of isolated regions of a self-assembled monolayer, the plurality of regions defining an ordered array on the support.
6. A device comprising:
a solid support;
an isolated region comprising a self-assembled monolayer of peptides, wherein the peptides are bound to the support by a bond between the support and a terminal reactive group in a preselected, reproducible pattern; and
a background region surrounding the isolated region and comprising a compound which can react with the support.
7. A device for immobilizing at least one biological material in a specific and predetermined pattern comprising:
a surface,
an array of immobilization islands in a specific and predetermined pattern over the surface isolated from each other by at least one background region,
the array of immobilization islands comprising a first self-assembled monolayer comprising at least one first functional group wherein the at least one first functional group is selected to be biophilic, and wherein the first self-assembled monolayer comprises a monolayer of linear peptides,
the at least one background region comprising a second self-assembled monolayer having a second functional group wherein the second functional group is selected to be biophobic.

PTO-1449 REPRODUCED

**SUPPLEMENTAL
INFORMATION DISCLOSURE CITATION
IN AN APPLICATION**

March 24, 2003

(Use several sheets if necessary)



ATTORNEY DOCKET NO.
0050.1587-003

APPLICATION NO.
10/071,500

APPLICANT
Shuguang Zhang, et al.

FILING DATE
February 8, 2002

CONFIRMATION NO.
4636

GROUP
1627

U.S. PATENT DOCUMENTS

EXAM- INER INI- TIAL		DOCUMENT NUMBER	ISSUE DATE / PUBLICATION DATE	NAME
	AE	6,329,209	12/11/01	Wagner et al.
	AF	US-2002-0072074-A1	06/13/02	Zhang et al

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FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATION YES NO

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

EXAMINER

DATE CONSIDERED